

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing of claims in the application:

Listing of the Claims

1. (currently amended) A process for the preparation of barium titanate powders, comprising separately and simultaneously introducing into a high-gravity reactor an aqueous solution (I) containing salts or organometallic compounds of barium and titanium, preheated to a temperature of from 60 °C. to 65 °C, and having a Ba/Ti molar ratio of more than 1, and an aqueous basic solution (II) containing an inorganic or organic base, preheated to a temperature of from 60 °C to 100 °C; performing the reaction of the solution (I) with the solution (II) at a temperature of from 60 °C to 100 °C, while maintaining the reaction mixture at a constant OH⁻ concentration to form a powdery reaction product containing barium titanate, then filtrating and washing the resulting powdery reaction product with deionized water to remove impurity ions and the excessive barium ions, and finally, drying to obtain barium titanate powders.

2. (previously presented) A process according to claim 1, in which in the solution (I), the total concentration of metal ions (Ba²⁺ + T⁴⁺) ranges from 0.1 to 2.0 mol/L and the Ba/Ti molar ratio is from 1.2 to 2.0, and the base concentration in the solution (II) ranges from 3 to 15 mol/L.

3. (original) A process according to claim 1, in which the flow rates of the solutions (I) and (II) vary from 5 to 300 L/h.

4. (original) A process according to claim 1, in which the flow rate ratio of solution (I) to solution (II) ranges from 0.5 to 10.

5. (original) A process according to claim 1, in which the pH value of the reaction mixture is maintained constant at about 14.

6. (original) A process according to claim 1, in which the salts of barium and titanium are selected from the group consisting of halides, nitrate, acetate, perchlorate, oxalate and alkoxides, and the base is selected from the group consisting of alkali metal or alkali-earth metal hydroxides, and quaternary ammonium bases.

7. (original) A process according to claim 1, in which the salts are chlorides and the base is NaOH, KOH or quaternary ammonium bases.

8. (canceled)

9. (original) A process according to claim 1, in which said high-gravity reactor is a rotating packed-bed reactor and the high-gravity level of the rotating packed-bed reactor ranges from 1.25G to 12,500G.

10. (currently amended) A barium titrate powder produced by the process of claim 1, consisting ~~essentially~~ of primary crystalline particles having a substantial uniform particle size and an approximately spherical morphology.

11. (previously presented) A ceramic produced by the process of sintering the barium titrate powder of claim 10.

12. (previously presented) The ceramic of claim 11, wherein the ceramic exhibits uniform microstructures, homogeneous chemical compositions, small grain sizes, and a dielectric constant of up to about 2,500.